Submission in response to the paper

'Australia: The healthiest country by 2020'

For:
The Preventative Health Taskforce

The Bicycle Network
The Bicycle Network: ACN 131 184 211

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Executive Summary

The Bicycle Network strongly endorses the concept of a disease prevention program as proposed by the Taskforce.

Our particular interest is in what the Taskforce calls obesity.

We suggest that this element be targeted at the cause – inadequate physical activity – rather than the symptom: obesity. Moving the focus upstream will enable the program to involve the whole population and capture more benefits. This aligns with the population health approach of focusing on upstream investments aimed at the social determinants of health.

For the program to be successful, we need to:

- Define physical activity.
- Establish efficacy ratings and assessments of scalability.
- Identify potential investment, recognising the importance of including unstructured settings in the scope of inquiry.
- Fund measurable programs with a competitive cost-benefit ratio.
- Encourage government to support the programs by legislation and other structural incentives that deliver the desired reduction in inactivity.

Bike riding has been proven to be efficacious in disease prevention. We outline how physical activity can be increased and obesity reduced through programs that increase the level of bike riding.

The Bicycle Network is well placed to assist the Taskforce, Agency and Government in addressing obesity through physical activity.

Introduction

This submission is from The Bicycle Network, the national representative of member based bike riding organisations. These groups promote and support bike riding participation and government investment in infrastructure. They directly engage with 500,000 people around Australia each year.

The Bicycle Network agrees that prevention is the key to reducing the burden of disease in Australia.

Prevention is a crucial investment. The Network acknowledges the challenge the Taskforce faces in transforming a system which is oriented to disease management, not preventative health.

In this submission the Bicycle Network argues that inactivity is the key cause of overweight and obesity.

The Network offers the Taskforce a framework to conceptualise and respond to the problem of inactivity, a key factor for overweight and obesity.

This paper argues that effective preventative strategies require detailed and thought-out frameworks, categories, metrics, delivery tools, monitoring and evaluation.

Part 1: Bike riding can deliver

1.1 A proven intervention

Physical activity is a powerful tool for improved population health. The tsunami of lifestyle diseases such as type 2 diabetes, cardiovascular disease and obesity can be avoided by increased physical activity.

Physical activity has a role in primary, secondary and tertiary prevention, as defined by the World Health Organisation and quoted in the discussion paper. Physical activity can, for example, prevent heart disease, minimise the consequences of heart disease, and provide a key role in recuperation from heart operations.

The first evidence based research which established the connection between physical activity and health was a study of bike riding. Baker IDI found that even small amounts of bike riding are effective. There is now incontrovertible medical evidence that bike riding prevents overweight and obesity, cardiovascular disease, cancer, type 2 diabetes and arthritis.[1]

From a mental health perspective bike riding reduces stress, anxiety and depression[2] and increases confidence and self esteem.[3]

Bike riding is accessible for people of all ages and both genders. It is an appealing activity for seniors as it improves cardiovascular fitness while being low impact on hips, knees and other joints.

Importantly, bike riding can be woven into people's everyday activities through incidental exercise.

The potential benefits of increased bike riding are perhaps best summed up in this quotation from Dr Chris Rissel, Director, Health Promotion Service Associate Professor, School of Public Health, University of Sydney:

Bicycle riding directly prevents and controls diseases in people by helping people to meet public health guidelines for physical activity. Riding recreationally or for transport involves moderate intensity physical activity which a great many scientific studies have clearly identified as having direct health benefits. The 1996 US Surgeon General's report was unequivocal on the health benefits of physical activity. (http://www.cdc.gov/nccdphp/sgr/sgr.htm).

Regular cycling has also been identified as having specific benefits over and above recreational physical activity:

- *Cycling improves cardiovascular fitness, uses all the major muscle groups, strengthens bones and helps prevent osteoporosis, improves circulation, reduces cholesterol levels, relieves the effects of rheumatoid arthritis and like all physical activity, helps people cope better with stress.*[4]

- *In a large cohort study involving 30,000 people in Denmark followed over 14 years, bicycling to work decreased the risk of mortality 40 per cent after taking into account leisure time physical activity.* [5]

- *In a cohort study involving 21,000 people in Finland followed over 12 years, people who spent more than 30 minutes a day cycling to and from work had close to a 40 percent lower risk of developing diabetes.* [6]

- *In a case-control study in Germany with 1246 pre-menopausal women, frequent cycling was associated with a 34 per cent reduction in breast cancer.* [7]

- *People riding a bike are exposed to 2-3 times less air pollution (volatile organic compounds) compared with people driving cars on the same road.* [8]

- *A Swedish cohort of 40,708 men, those men who walked or cycled an average of 30 minutes a day was associated with a 34% lower rate of cancer death and with improved cancer survival of 33%.*[9]*The incidence of cancer was 16% lower among those who walked or cycled at least 60 minutes a day. The authors attribute the health benefits to active living through walking and cycling.*

In the Australian context, my own research has found that men who cycled to work were significantly less likely to be overweight or obese compared with men who drove to work.[10] *A recent report identified that cycling to work twice a week at current levels of cycling was associated with savings in health care costs of $227 million dollars per year.* [11]

1.2 A population wide intervention

Bike riding can deliver societal scale population health.

Most bike riding occurs outside the traditional club or institutionalised sporting structure, so is often not included in traditional references to sport and club based activities such as football.

Bike riding benefits, however, from being represented by the Bicycle Network. The Bicycle Network organises and provides access to bike riding.

Further, the Bicycle Network has experience in the delivery of societal scale programs such as Ride2School and Ride to Work. These are national behaviour change platforms for the delivery of preventative interventions. In just a couple of years, Ride to School has increased children's active transport from 20% to 45% across hundreds of schools. Ride to Work boosts adults' ongoing active transport with 10% of new riders on Ride to Work Day shown to be still riding five months later.

The Bicycle Network also takes a lead role in its various states in planning and advising on bike riding infrastructure such as bike lanes, off-road paths and facilities such as bike parking. Infrastructure supports the community increasing physical activity; good infrastructure is well used as it provides for latent demand in the community for safe, fun and affordable transport and recreation.

Finally, as a not for profit group, with significant success in engaging the community; The Bicycle Network can provide advice about measurable voluntary behaviour change or community based social marketing.

In particular The Bicycle Network understands how to engage people outside the traditional clubs and organised arenas, and knows how to encourage and maintain participation in physical activity (see 2.2 for more discussion about this).

The Bicycle Network is available to provide the Taskforce and the National Prevention Agency with strategic planning advice and the delivery of bike riding programs, infrastructure and communications in both mainstream and disadvantaged audiences.

The following section provides general comments on the paper *Australia: The healthiest Country by 2020* to assist the taskforce with increasing the focus on physical activity.

Part 2: Framing the campaign

In this section we respond to the framing of the proposed disease prevention program. The prevention program must be framed in the most effective manner.

At the highest level we are uncomfortable with the expression 'preventative health' as it contains a contradiction. We suggest that disease prevention is a more direct description.

The first area identified by the Taskforce is 'overweight and obesity'. We argue that the focus should be on physical activity, rather than obesity.

2.1 Start upstream

In general disease prevention programs aim upstream at the underlying cause: clean water, fewer mosquitoes, vaccinations, condom use, reduced smoking and so on.

We urge the Taskforce to shift its language upstream to 'inactivity'. We should be trying to reduce inactivity – defined as a level of activity lower than has been shown to be associated with preventing disease. Overweight and obesity are downstream symptoms.

2.2 Capture all benefits

By starting upstream we can capture all the downstream benefits of increased activity. These include the maintenance of healthy bones, muscles, and joints; prevention of falls among older people; and reduced depression. These benefits would not necessarily be captured by a program with a downstream focus on body weight.

If the anti smoking program had tackled one of the downstream consequences – a smoking related disease such as lung disease for example – it would not have been able to deliver the reductions in peptic ulcers and bladder cancers that have occurred through the wider message about smoking.

2.3 Activity is further upstream than diet

In our view inactivity is further upstream than diet. Baker IDI researchers are emphatic that it is 'better to be fat and active than thin and inactive'.

We understand the interaction of the quantity and quality of diet with activity and health. The quantity of calories consumed must be balanced by activity outputs. It would be

possible to be ‘active enough’ and still ‘eat too much’. We also understand that even when inputs are balanced by outputs, there is a nutritional standard that must be observed to optimise health.

The institutional voice for healthy eating is powerful. We ask the Taskforce to be prudent in evaluating the evidence base and the relative importance of diet compared with physical activity.

We ask then that physical activity be separated accordingly from healthy eating. In fact, as we explain below, a more rigorous mapping of the various interventions for prevention will assist in a re-prioritising ‘what we need to do’.

2.4 The program must recruit everyone

The disease prevention program needs to be targeted at everyone.

Reducing inactivity is a compelling behavioural statement; requiring a response from everyone in the community. Each member of the community has to do enough physical activity, whatever their waistline or current level of activity.

If we frame the program around obesity it becomes a problem that ‘fat people’ have. The consequence of this approach is that we have get people to think that they are in the target category before we can engage them on the issue – a doubly difficult job.

2.5 Three things to reduce

This approach aligns the three issues in the report around the concept of ‘reduce’. The community needs to reduce inactivity, daily smoking and harmful drinking.

As the Bicycle Network has expertise in physical activity, it will now offer some further analysis in this area.

Part 3: Laying the foundations

A successful disease prevention program will need to be based on solid foundations.

In the next section we identify some of the work that has to be done to support a successful program.

3.1 Define types of physical activity

Government at all levels struggles to distinguish clearly between physical activity taking place as part of:

- Elite sport – done by few and watched by many
- Organised Sport – cricket for example
- Physical Activity – riding a bike to work
- Exercise – gym
- Physical Recreation - bushwalking

At the moment the funding and attention of the Government emphasises the structured activities (such as club based physical recreation and organised sport).

Unstructured activities such as such as bike riding, walking, dog walking, swimming, jogging, Pilates and kick to kick football are under emphasised.

As a result Government policy and funding is unbalanced.

In our view governments should improve their understanding of these categories and, from a disease prevention point of view, develop an understanding of their efficacy as well as their current and potential social impact.

We suggested in our submission to the '*Australian Sport: emerging challenges, new directions*' that there is an opportunity to do this work now that Sport has been moved into the Department of Health.

3.2 Recognise unstructured settings

Current debate around activity blurs the context of physical activity; in particular the distinction between and relative importance of structured and unstructured settings.

The community tends to equate physical activity with sport and sport with physical activity. However, more people are active through unstructured settings.

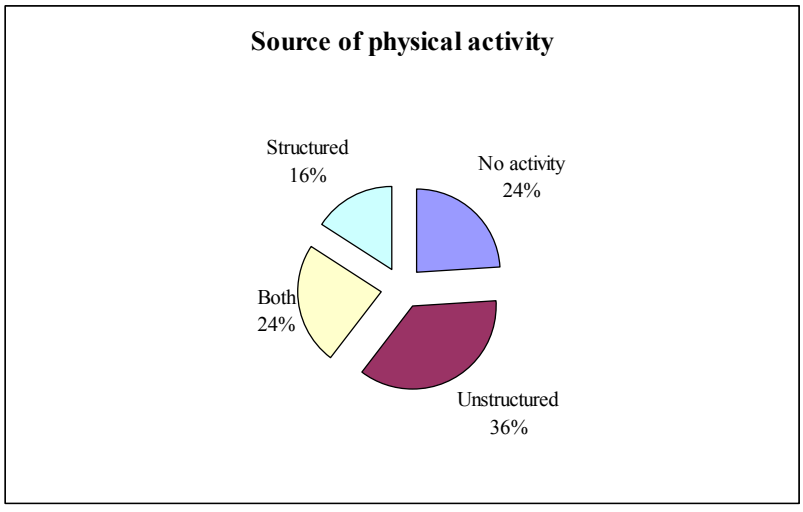
Unstructured physical activity is now more prevalent than structured. The market share of unstructured physical activity continues to grow. For example 36% of Victorians get their exercise in unstructured settings[12].

Unstructured activity includes activities like: walking, jogging, bike riding, swimming, walking the dog, surfing, playing kick to kick football, cricket and basketball in the park and backyard, attending yoga, pilates and the gym, working out with personal trainers and more.

This trend reflects an increasing emphasis in the community on flexibility:

- People have or perceive that they have less time.
- People are not taking their leisure at the same time making team games and scheduling more difficult.
- Structured sport often requires travel to purpose built facilities further reducing flexibility.

Another significant group of the population takes exercise in *both* unstructured settings and structured settings. They play squash on Tuesdays and go swimming twice a week for example.



The proportion of the population involved in unstructured physical activity increases with the age of the community. Older people are less likely to do structured sport.

As the Australian population ages, this trend will further increase the significance of unstructured physical activity.

We believe that the Taskforce should draw the attention of the community and government to these proportions and trends.

If unstructured physical activity is so fundamental, enduring and on the upward growth curve, a key question for the Taskforce is how to capture and grow the opportunities unstructured activities provide.

3.3 Rank by efficacy

Although there is a consensus on adequate levels of physical activity, this information has not been cross referenced with common behaviours.

Rough guides have been published that try to link time, intensity and frequency. These need to be established on a sound disease prevention base.

The campaign should emphasise and endorse the behaviours that deliver adequate physical activity and de-emphasise those that don't.

We need the physical activity equivalent of 'every cigarette is doing you damage', 'brush your teeth every day' and the hand washing guidelines[13] for example.

This work will be challenging.

Low level unstructured activities that are on some lists, such as washing the car, may need to be demoted if they are shown to provide inadequate disease prevention.

The hand washing guidelines do just this. They 'demote' running your hands under running water as it provides inadequate disease prevention. The guidelines emphasise that water, rubbing and soap are necessary.

Some sports will fail the efficacy test.

Counter-intuitively physical activity in structured settings does not seem to have a direct link to adequate levels of physical activity:

- Those who are active but infrequently, on average less than once a week, are mostly involved in structured physical activity[14].

- High levels of structured physical activity are associated with overall low participation in physical activity[15]

Looking back to the previous discussion on settings, it appears from this evidence that structured activities are not enough on their own and that preventative health strategies should encompass unstructured settings, combinations of structured and unstructured activities and pay attention to unstructured activities in their own right.

Policies, structures and funding would then logically flow from this ranking.

3.4 Assess potential scale

Efficacious behaviours that pass the above test should then be evaluated and ranked according to their potential as platforms for delivering societal scale disease prevention.

Some activities will be relevant to everyone everywhere. Others will provide an inadequate platform as they have low reach and relevance across the community. They may not, for example, attract a large number of people, may not be relevant in some areas and may not be relevant to many age and gender groups.

To illustrate this, scuba diving may prove to be efficacious in disease prevention but limited in its appeal and relevance to most age groups and to those who live away from the coast.

Some activities will be more capital intensive than others. A pool for example, is more expensive to build and maintain than a path. It is likely that a synthetic hockey pitch will be more expensive per physical activity session per person than a basketball court in a park.

This work will reveal a group of scalable and efficacious activities suitable as the foundation of a preventative health initiative. Investment will then take place in those that are scalable and efficacious.

Scalable		Investment zone
Not scalable		
	Not Efficacious	**Efficacious**

3.5 Assess age range

Efficacious behaviours that are or can be life long should be ranked highly by the program. Competitive contact sport has perhaps a thirty year span across an individual's life. Bike riding and dog walking have twice the span.

3.6 Use all levers

It will be difficult for government at all levels to support efficacious, scalable activity as some ineffective behaviours are well supported by strong institutions while some effective behaviours have no structure.

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Elite sport for example is well supported by vertically integrated institutions with representation at a global, national, state and local level. This gives these institutions a strong voice for more dollars, facilities, programs, technology, and science. Diet and nutrition is supported by a profession, by academia and by an established integration and recognition by the disease management side of medicine.

These institutions offer attractive levers to government but neither is effective however as a platform for a societal scale intervention to reduce inactivity.

As we have seen above, scalable, efficacious unstructured physical activity will be fundamental to a successful preventative health effort in this area.

Unstructured activities don't, in general, come with institutions behind them. Perhaps this is part of the reason that the 'unstructured' category has failed to be adequately represented.

It can be hard to reach the group of people who get their physical activity or wish to increase it through unstructured physical activity. Community organisations, sporting clubs and even gyms won't capture everyone, nor provide communications to current and prospective participants in unstructured physical activity. How would Governments reach out to dog walkers for example if this widespread behaviour proved potentially efficacious?

We recommend that the Taskforce be mindful of this imbalance and consider how to run a systematic and measurable program through non-traditional networks.

As a popular unstructured activity, it is somewhat unusual that bike riding has an organisation behind it, the Bicycle Network. The Network has direct contact with over 500,000 participants nationally. It has experience in communicating and increasing participation in this 'unstructured' audience and how to analyse and deliver infrastructure improvements.

If bike riding is seen on its own merits as a worthy, evidence based physical activity which can assist in population based prevention, The Bicycle Network stands as a ready avenue of assistance in terms of policy development, and delivery of programs, communications and infrastructure.

3.7 Use a cost benefit approach

The disease prevention campaign should develop a cost benefit approach to the programs that it funds.

There will without doubt be many schemes proposed to increase physical activity.

Initial funding should be based on estimated return on investment and future funding dependent on establishing a favourable cost benefit ratio.

This approach is used in the British Health System through the National Institute for Health and Clinical Education. This institute has, for example, set a ceiling of $35,000 for costs to save six months of life. The institute has also analysed the cost-effectiveness of surgical operations, cancer screening tests and medical devices.[16]

3.8 Fund measurable programs

Investment in behaviour change is tricky.

Government is comfortable estimating and investing in capacity. If the physical activity program were to fail, it would know exactly how to build the $6b worth of additional hospitals and services that would be required.

Government is also comfortable with alternatives. For example it can compare the cost and efficacy of two drugs that tackle a similar disease.

Similarly investing in prevention can be costed especially if the intervention is a medical or physical intervention. These interventions can cost as much as $7000 per person or as little as a saving of $5 per person[17].

Investing in measurable behaviour change is more risky as many programs are measured on outputs – brochures, TV ads and so on – rather than on changed behaviour.

Fortunately for a disease prevention campaign on physical activity the Bicycle Network is currently coordinating two cost effective systematic, measured[18] and successful voluntary behaviour change programs[19] across Australia called *Ride to work* and *Ride2School*. These year round voluntary behaviour change programs are founded on the principles of Community Based Social Marketing[20] which successfully enrols government, corporate and individuals in increasing the number of adults taking the journey to work and the number of students walking and riding to and from school.

We estimate that a fully scaled up Ride to Work Program will each year establish new physical activity[21] for around 30,000 people for around $350 per head. The Ride2School program has changed reported behaviour in 35,000 school children in the first two years of the program in Victoria for around $60 per new walker/rider. It is likely that this cost is lower as many schools and students participate in the program and do not report their activity levels.

This measured cost compares well to the capacity cost facing government which, according to Baker IDI data, suggests obesity related medical intervention could be estimated to cost $8,500[22].

3.9 Introduce legislation and incentives

The measureable and cost effective programs mentioned above will reveal opportunities for government to catalyse and support the program.

Past efforts to provide a physical activity incentive to those with private medical cover have been unfocused and unmeasured. The principle is however sound.

Legislation analogous to the Disability Discrimination Act can be imagined to ensure for example that all buildings support priority access by active transport.

Part 4: Responses to questions posed by the paper

4.1 What is a realistic target for 2020?

It is important that the Taskforce establishes a positive, specific and measurable, outcome based target as outlined in our full response document. The recent water conservation target in Victoria of 155 litres a day for household water usage is a good example of a target as it relates both to the individual and the population.

We propose '80% of Australia's population does enough physical activity to prevent disease.'

This target aims to reduce the no-physical activity (25%) and inadequate physical activity (25%) categories by more than half.

This is ambitious, but substantial easy gains are achievable.

The obesity related target provided in the *Australia: the Healthiest country by 2020* paper is to 'halt and reverse the rise in overweight and obesity'. Halting a rise will not inspire the funders, the program staff or the population.

In addition the program will need to set and measure key performance indicators for all segments of the continuum from activity to inactivity; for example, for each of the recognised categories of pre contemplation, contemplation, preparation, action and maintenance.

4.2 How can key players be engaged from the outset?

First of all the Taskforce has to identify who to engage. Assessments will reveal which behaviours are effective in preventing disease and which are scalable across the population. Some potentially effective and scalable behaviours will not have effective organisational representation. The Taskforce may find establishing networks in these areas valuable.

The Taskforce and agency should provide an over-arching framework and structure for the players to act within. The agency should be the policy maker, players' negotiator, program selector, funds provider and program evaluator, and ultimately accountable for measuring and communicating preventative health gains.

4.3 Learning by doing and building the evidence base

What is the best combination of learning by doing and at the same time building the evidence base?

We put a strong emphasis on learning by doing. Douglas McKenzie-Mohr's Community Based Social Marketing principles for stimulating voluntary behaviour change are useful:

- specifically select each individual behaviour you wish to change and choose to focus on the behaviours which will deliver greatest impact and probability that people will engage in them,
- specify the barriers and benefits of each behaviour through research (literature searches, focus groups, surveys) as well as intuition,
- develop a strategy to emphasise the benefits and discourage the barriers; strategies include 'commitments', prompts and communications,
- pilot the strategy in small scale, low cost, measurable way,
- Evaluate scrupulously; including the behaviour change, the resource use and the resource quality.

In general we don't lack an evidence base for the need – inactivity – nor for the solution – adequate physical activity. There are many assessments of the cost of disease caused by inadequate physical activity for example. There are many studies that support physical activity as a disease prevention strategy.

What we do lack is a rigorous evaluation of the success of various interventions in prevention. These results can only be gathered by funding interventions and evaluating them as McKenzie-Mohr suggests.

4.4 What can individuals and families do?

What can individuals and families do to be physically active, eat well and maintain healthy body weights?

We are not sure why you are asking this question. The question is how do we get families to get enough physical activity? We suggest that the active minutes will come through displacing transport trips from private motor vehicles to active transport, and through unstructured recreation.

4.5 In what ways can high-risk groups be supported?

Some interventions will work with high-risk groups and the mainstream population. Ride2School, which includes both riding and walking to school, works in diverse communities because most children in every community attend school.

The Ride2School behaviour change program delivers cost-effective physical activity which works because it combines an activity which children love, is fun and social, with a rigorous methodology.

The Ride2School program shows some very promising results within 2 years of its inception. 952 of Victoria's 2294 schools have joined the Ride2School program with 45% of students in these participating schools walking or riding. It suggests that bike riding coupled with appropriate, tested community strategies can deliver results relatively quickly than perhaps expected.

Ride2School is not only accessible to children of all SES and cultural backgrounds; it works with children where early habits have the potential to translate to lifelong habits.

The more disadvantaged schools in the program are performing as well as any other schools. The parents and students may have particular barriers to overcome that might include: owning a car being aspirational, especially among recently arrived migrants; it is harder for the parent body to raise funds to build a bike shed; and the kids may not own bikes.

In general it is likely that bikes as a transport tool for getting to work or school will be effective for high-risk groups. Motivations in this group might be more towards minimising public transport inconvenience or reducing car costs rather than health or environmental concerns.

Infrastructure such as bike paths provide a community resource for transport and recreation by all groups in society. Geographic analyses will help to identify where

infrastructure treatments will have most impact and their probability of usage. Investment can be targeted as geography is also a good indicator of socio-economic status and cultural and linguistic diversity.

Appendix 2 provides an overview of what it would take to finance the stimulation of Ride2School at a population level across Australia and some anticipated results of this investment.

4.6 Are the priorities for action appropriate?

We would write the priorities as follows:

1 Support cost effective, measurable societal scale programs that stimulate a voluntary increase in lifelong physical activity that is effective in preventing disease.

2 Monitor these factors.

3 Support these programs with legislation and infrastructure.

4.7 A National Prevention Agency?

Do you support the development of a National Prevention Agency to lead and guide coordinated action for prevention?

Yes. The Agency should provide an over-arching framework and structure for the programs, their funding and evaluation. It should be responsible for monitoring and communicating the public health impact of the disease prevention programs.

4.8 Is the suggested approach adequate?

We propose the Agency launches three targeted campaigns: inactivity, tobacco and alcohol. The performance indicator would be in each case to reduce the number of Australians affected.

We feel the benefits of separation – like previous campaigns around road trauma, condom use and clean water – outweigh any advantages of integration.

The Agency, through its reports on the three campaigns, would symbolise the overall approach of prevention.

We would expect in time that other disease prevention campaigns would be launched.

4.9 Are these measures appropriate?

We strongly recommend that the Agency stick to Tier One and measuring people at risk: who isn't getting enough physical activity, who is smoking, who is abusing alcohol?

Other data and factors in Tier 2 and below are interesting and useful. They are more the concern of the behaviour change programs within each campaign. Some of the measures suggested will prove to be symptoms rather than causes, some will prove amenable to cost effective change, and some will not. Some will reveal trends and carry clues to help the behaviour change initiatives.

5 Conclusion

We support the establishment of a disease prevention agency.

This agency should be responsible to the Commonwealth government for a number of disease prevention campaigns.

We agree with the three targets proposed but suggest that the first be reframed upstream as 'reducing inactivity' so that the whole population can be enrolled in the program and the maximum benefits gained.

For each target, the agency should report on the number of people at risk, the number moved out of the risk category and the 'disease treatment' money saved.

For each target the Agency should launch a campaign containing a series of interventions.

The 'reducing inactivity' campaign should the most cost effective interventions, where the campaign can support cost effective, measurable societal scale programs that stimulate a voluntary increase in lifelong physical activity that is effective in preventing disease.

In the area of physical activity there is some fundamental work to be done to identify potential interventions from among many candidates in many settings. Some hard decisions will have to be made as some traditional 'sports' will be shown to be inadequate in their ability to prevent disease, societal reach or lifelong relevance. On the other hand, some unstructured behaviours that are proven to be effective, such as bike riding, will prove to be cost effective to establish as a life long activity habit at a societal scale.

The agency should then tender out funds for measurable behaviour change programs in the identified areas to those who can deliver the desired results and maintain, increase or withdraw funding on a performance basis.

The Bicycle Network is able to deliver these outcomes for the agency and we look forward to providing any assistance to the agency as it develops its role and later in the development and roll out of its campaigns.

6 Appendices

Key stakeholders of our emergent behaviour change programs

The Ride to Work and Ride2School programs are already strongly linked to government at each level:

Federal Government

- Ride to Work 2008 grant from Department of Environment Water and Heritage Senior public servants are Ambassadors at a number of federal government Departments including ATO, DEWHA, and Department of Veteran's Affairs.
- Support for breakfasts at federal government offices around Australia

State Governments

- Ride to Work
    - State level funding NSW, Queensland and Victoria
    - Senior public servants are Ambassadors at a number of state government departments including Main Roads Queensland, Department of Premier and Cabinet SA and VicHealth
    - Support for breakfasts at state offices around Australia
- Ride2School
    - State level funding in NSW and Victoria

Local Governments

- Both programs: in kind support from more than 100 Local Governments around Australia
- Mayors and CEOs are Ride to Work Ambassadors at a number of local government authorities including Brisbane, Marion (SA), Bayside (Vic)

Institutions

The Ride to Work program has strong links to institutions including:

- Children's Hospital Westmead, University of Southern Queensland, Swinburne University of Technology

Business

The Ride to Work program has strong links to corporate Australia including:

- More than 1000 breakfasts provided by corporates
- Ambassadors at Geelong Advertiser, Adelaide Advertiser, RACV
- In kind and cash sponsors include Bakers Delight, BUPA Australia (MBF, Mutual Community, HBA), Baker IDI Heart and Diabetes Institute, Trek Bicycles.

The Ride2School program has support from Pacific Brands.

Cost and scale of national programs to increase bike riding

We anticipate a core central office responsible for the program overall including national coordination of the program elements and related events such as Ride2School and Ride to Work Day. This team would be supported by marketing, promotions, IT and evaluation staff.

This group would be complemented by on the ground staff in each state. There would be budget for marketing collateral, mail and advertising to support the program.

For a budget of around $10m each year, each program would be able to reach a significant proportion of the population.

We estimate that a fully scaled up Ride to Work program would enrol 250,000 people a year and turn around 30,000 into regular riders at a cost of around $350 a head.

A similar Ride2School program would stimulate walking and riding in 250,000 students across Australia and lift the proportion of active travel in 1000 schools from 20% active transport to more than 50% at a cost of around $100 per head.

7 Endnotes

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12 Victorians' Participation In Exercise, Recreation And Sport (2001-02) Sport and Recreation Victoria in collaboration with the Victorian Health Promotion Foundation (VPIERS).

13 **When to wash your hands**
You should wash your hands thoroughly:

- Before preparing food
- Before eating
- Between handling raw and cooked or ready-to-eat food
- After going to the toilet or changing nappies
- After smoking
- After using a tissue or handkerchief
- After handling rubbish or working in the garden

- After handling animals
- After attending to sick children or other family members.

How to wash your hands properly

To wash hands properly:

- Wet your hands with warm water.
- Apply one dose of liquid soap and lather well for 15–20 seconds (or longer if the dirt is ingrained).
- Rub hands together rapidly across all surfaces of your hands and wrists to help remove dirt and germs.
- Don't forget the backs of your hands, your wrists, between your fingers and under your fingernails.
- Wash your hands for at least 10 to 15 seconds
- Rinse well under running water and make sure all traces of soap are removed, as residues may cause irritation.
- Pat your hands dry using paper towels (or single use cloth towels). Make sure your hands are thoroughly dry.
- Dry under any rings you wear, as they can be a source of future contamination if they remain moist. If possible, remove rings and watches before you wash your hands.
- Hot air driers can be used but, again, you should ensure your hands are thoroughly dry.
- At home, give each family member their own towel and wash them often.

14 Those who are active (on average) weekly, often participate in both organised sport and recreation and unstructured sport and recreation. However, those who get exercise on a less regular basis tend to be in two camps. The larger group participates in organised activity only; the smaller group does unstructured sport and recreation (VPIERS).

[15] All of the regional areas of Victoria (and NW Melbourne) have an above-average proportion of their population whose sole activity occurs in an organised setting. These regions' overall participation rate is generally low. (VPIERS).

16 New York Times 3 December 2008

17 The Gardasil HPV vaccine program for example costs $7 125 per person. Diarreah prevention at a Kenyan school produced a saving of $5 per student per year. 'The start-up cost for SWS totaled $123 ($34 for pots, $32 for tanks, and $57 for a handwashing station). Recurring monthly costs were $152 ($8 for 14 bottles of WaterGuard per month, $143 for staff costs, and $1 for filter cloth). Overall annual SWS operating costs were $1824, or about $4.80 per pupil. Reduced diarrhea rates resulted in average monthly reductions of $250 in medical costs, $40 in personnel costs required for tutoring absentee children, and $46 for firewood purchases for boiling drinking water. The annual cost reduction was $4032, or $10.61 per pupil. After subtracting start-up costs, the SWS and handwashing program saved the school $2085 a year, or $5.49 per pupil.'

Diarrhea prevention in a Kenyan school through the use of a simple safe water and hygiene intervention
John Migele, Sam Ombeki, Mary Ayalo, Matthew Biggerstaff, and Robert Quick

18 Monitoring and evaluation

This is conducted by Bicycle Victoria in conjunction with Associate Professor Geoff Rose, Director, Institute of Transport, Monash University, and Sabina Wills of Sassafras Solutions.

Process Evaluation

- Web-based18 registration survey for Workplace Coordinators and individual participants (Jun–Oct 2008)
- Obtain contact details for follow-up surveys (all) and mail-out of promotional kits (Workplace Coordinators)
- Measure (day by day) engagement with the program throughout Australia
- Gauge success of specific activities in the PR campaign
- Profile individual participants and workplace coordinators

Web-based registration survey for community breakfast coordinators

- Map engagement with the program by councils and other organisers throughout Australia
- Gauge success of specific activities in the PR campaign
- Gauge success of specific activities in the network marketing campaign

Web-based follow-up survey for community breakfast coordinators (Oct 2008)

- Feedback on promotional kit, PR and other support provided
- Increased understanding of the various forms the event takes in local government areas

Web-based post-event survey for state/territory cycling organisations (Oct 2008)

- Feedback on promotional kit, registration process, PR and other support provided
- Description of CBD breakfasts in capital cities

Web-based follow-up survey for Workplace Coordinators (Nov 2008)

- Feedback on promotional kit, PR and other support provided
- Increased understanding of the various forms the event takes in workplaces throughout Australia

Follow-up interview with representative from state/territory cycling organisations (Nov 2007)

- More detailed feedback on the process

Media monitoring

- Record of print and electronic media publications and measure success of key stories. Integrate individual participant and workplace coordinator stories into local media releases.

Process measures to be reported on will include:

- Level of engagement by individuals, local councils and workplaces
- Media exposure
- Satisfaction of organisers (state/territory organisers, community breakfast organisers and workplace organisers) in terms of registration process, promotional kits, PR and other support.

Monitoring the outcome

Registration survey for individual participants (Aug–Oct 2008)

- Calculate greenhouse gas reduction impacts for the event day
- Estimate potential medium-term greenhouse gas reduction impacts

Follow-up web-based survey of registered participants five months after the event (Feb 2008)

- Calculate medium-term behaviour change impacts
- Estimate medium-term greenhouse gas reductions
- Measure the impact of the event as a behaviour change tool

Outcome measures to be reported on will include:

- Travel behaviour change impact on the event day
- Travel behaviour change impact in the medium term
- Greenhouse gas abatement on the event day
- Greenhouse gas abatement in the medium term

Reporting will include state/territory comparisons and demographic breakdowns.

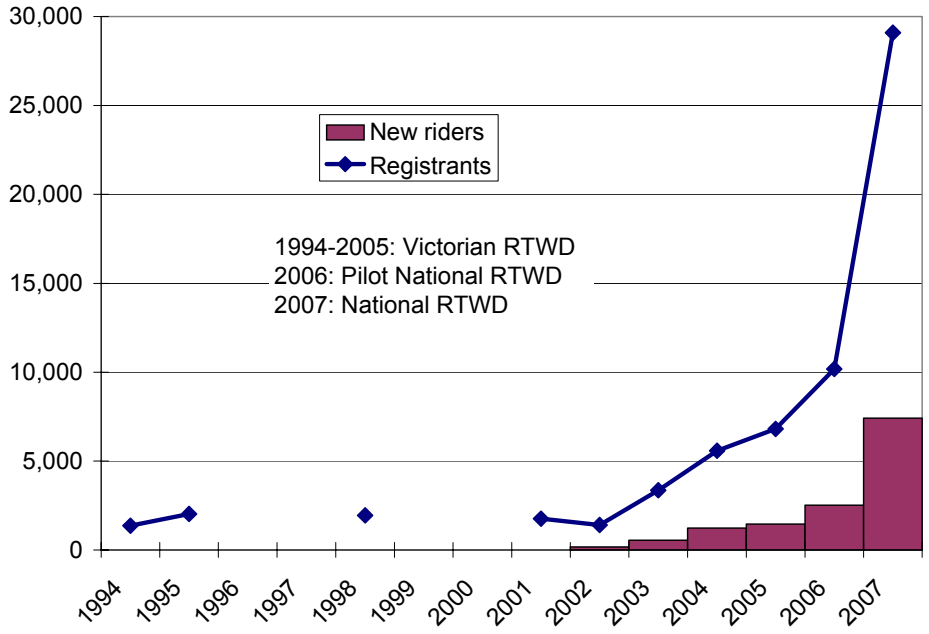
19 How the program works

National Ride to Work Day now in its 15th year (and 3rd nationally), is a social motivator; a celebratory and fun occasion to ride to work. It motivates both new and established riders. The Day sits inside the program and acts as a call to action and an impetus for preparation for individuals and organisations. The result is that novices to ride to work for the first time.

The year round program behind the Day is carefully designed for both preparation activities and to encourage long term behaviour maintenance, for example by setting up ongoing workplace Bicycle User Groups (there are now 223) and providing them with seasonal prompts, incentives and support. The year round program is designed to move people and workplaces along the behaviour change spectrum, from never ridden before to new riders and from new riders to regular riders.

The year round program focuses on preparation including:

- This includes, at a workplace, establishing workplace policy, installing bike parking, lockers and showers.
- Recruiting volunteers in the work place to be work place organisers.
- Gaining, permission or support from management. Some senior managers will strongly endorse Ride to Work internally. Some become public Ambassadors.
- Closer to the Day the emphasis includes promoting the Workplace Challenge, providing incentives and rewards for registrations and developing community breakfasts for those in small companies or at work sites that do not overtly support the Day.
- The Day acts as a decision point and a stimulus to action. The emphasis of the program then switches to establishing the new habit.
- The two key measurables are:
- ‘novices’ – the number of people who rode to work for the first time on Ride to Work Day
- ‘graduates’ – the number of novices that rode to work in a particular week five months after Ride to Work Day.



20 Community Based Social Marketing
The principles of Community Based Social Marketing have been outlined by Dr McKenzie-Mohr. Dr. McKenzie-Mohr is a Professor of Psychology at St. Thomas University, Fredericton, Canada.
Doug McKenzie-Mohr, PhD, is an environmental psychologist and a leading expert in the design of programs to promote sustainable behaviour. His book, Fostering Sustainable Behaviour: An Introduction to Community-Based Social Marketing, co-authored with William Smith, is the definitive text on the discipline of community-based social marketing. He has served as chair of the American Psychological Association Task Force on Sustainable Development, as coordinator of the international organization Holis - The Society for a Sustainable Future, as a member of Canada's National Round Table on the Environment and the Economy, and as a member of the National Advisory Committee for SustainABILITY. He has been awarded the Canadian Psychological Association's Psychologists for Social Responsibility Research and Social Action Award and the Society for the Psychological Study of Social Issues Public Advocacy Fellowship. His website is www.cbsm.com

21 On a random weekday five months after Ride to Work Day a follow-up survey of registered participants on the day is conducted. Its purpose is to count the number of people still riding five months later and hence provide some data about behaviour change maintenance.

[22] Cost of obesity related admissions. They estimate that 7 out of 10 middle-aged men and 6 out of 10 middle-aged women being overweight or obese. In other words around 1.5 million middle-aged Australians are currently obese and therefore at high risk of a CV event in the longer-term.
This will result in an extra 700,000 CV-related admissions in the next 20 years. These interventions highly preventable admissions will conservatively cost (in today's terms) an extra $6 billion ($2.9 billion in hospital costs alone) in health care. [Therefore each intervention costs $8 500].
Stewart S, Tikellis G, Carrington C, Walker K, O'Dea K. Australia's future 'Fat Bomb': A report on the long-term consequences of Australia's expanding waistline on cardiovascular disease. April 2008, BHRI, Melbourne, Australia